



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,143	02/26/2004	Scott A. Anson	H0003187-1628	5022

7590 07/20/2006

Matthew S. Luxton
Honeywell International, Inc.
101 Columbia Road
Morristown, NJ 07962

EXAMINER

SANGHAVI. HEMANG

ART UNIT	PAPER NUMBER
----------	--------------

2874

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,143	Applicant(s) ANSON ET AL.	
	Examiner Hemang Sanghavi	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 3-7 and 10-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 22 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species II in the reply filed on March 31, 2006 is acknowledged. The traversal is on the ground(s) that a complete search for Species II would necessarily encompass a through and complete search for the non-elected Species. This is not found persuasive because the distinctive feature of the elected specie does not require or encompass a through and complete search for the non-elected species. Applicant's identification of claims 1-6, 8, 15-16, 19 and 22 encompassing the elected species II is incorrect.

Species I: Fig. 3 (Claims 3-6) directed to an IFOG utilizing a single splitter to provide the light to the wavelength division multiplexer/detector assembly.

Species II: Fig. 4 (Claims 8-9) directed to an IFOG utilizing switches.

Species III: Fig. 5 (Claim 7, 11-14) directed to an IFOG utilizing a plurality of splitters to provide the light to the wavelength division multiplexer/detector assembly.

Species IV: Fig. 6 (Claims 10, 17-19) directed to an IFOG utilizing tap couplers and a single circulator.

Species V: Fig. 7 (Claim 16) directed to an IFOG utilizing a single tap coupler and switches.

Species VI: Fig. 8 (Claims 20-21) directed to an IFOG utilizing three tap couplers and a circulator.

Claims 1-2 and 22 are generic.

Art Unit: 2874

As stated above search required for the IFOG utilizing the splitter does not encompass the search required for the IFOG utilizing switches or circulators. Nor does the distinct feature claimed in the non-elected species become obvious variant if the examiner finds the elected species unpatentable over the prior art.

Claims 3-7 and 10-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species.

The requirement is still deemed proper and is therefore made FINAL.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP 809.02(a).

The action on merit of the elected species II (claims 1-2, 8-9 and 22) is as follows:

Drawings

Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The prior art documents submitted by Applicant(s) in the Information Disclosure Statement(s) filed on 10/28/2005 have all been considered and made of record (note the attached copy of form(s) PTO-1449).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2874

Claims 1-2 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michal et al (US 6,108,086).

Michal et al discloses a system of stabilizing the scale factor shift in fiber optic gyroscope using a spectral monitor array comprising:

- a light source (202);

- a sensing loop assembly (220) in communication with the light source;

- a wave division multiplexer/detector assembly (224) in communication with the light source that is used for wavelength control; and

- narrowband filter (206) in communication with the light source and the wavelength division multiplexer/detector assembly to compensate for errors in the wavelength division multiplexer/detector assembly. (See lines 5-15 of column 5 and lines 8-47 of column 6).

Michal et al fails to explicitly state that the narrowband filter is a fiber Bragg grating reflective filter.

However the use of the fiber Bragg grating filters as a narrowband filter is well known and commonly available in the art. It is certainly desirable in Michal et al to use a fiber Bragg grating as a narrowband filter since the IF OG disclosed uses optical fibers and couplers. Such fiber Bragg grating filter can be easily integrated in the fiber itself which is used in the Michal et al for transmission means from the light source to other components. Such integration of the Bragg grating filter in the fiber reduces the cost of the device and provides optimum coupling rather than using the discrete filter with connective components. Note, Michal et al suggests to use the Bragg grating filter or

Art Unit: 2874

any other type of bandpass filter for the secondary bandpass filters 230 (see lines 28-30 of column 6).

From available well known filters and desirability in Michal et al using optical fiber components, it would have been obvious at the time of the invention to use a fiber Bragg grating reflective filter as the narrowband filter of Michal et al to reduce the overall cost of the device and optimum coupling between the filter and the wave division multiplexer/detector assembly.

Allowable Subject Matter

Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to disclose or suggest the claimed IFOG including a switch to switch the narrowband FBG in and out of an optical circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemang Sanghavi whose telephone number is (571) 272-9955. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Hemang Sanghavi
Primary Examiner
Art Unit 2874

HS